

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

AMENDMENTS TO THE SPECIFICATION

Page 1, last paragraph, bridging to page 2, delete in its entirety, and insert the following new paragraph:

EP 0 896 396 A2 describes a connector, comprising a female connector and a male connector. The female connector has a female connector housing and an insertion chamber enclosed by a wall. The insertion chamber is open towards one end face of the female connector housing and on its end distanced thereto is closed by a base. The female connector has a first longitudinal axis, defining a connection direction. First contacts are arranged to the female connector housing. The first contacts are aligned parallel to the first longitudinal axis and project from the base into the insertion chamber. On the outer face of the wall enclosing the insertion chamber a retaining projection is projectingly arranged. An elastically displaceable retaining arm, lockable by means of a slider, when it is arranged in the locking position and pre-vents, thereby, a displacement of the locking arm from the relaxed position, is arranged to the male connector. Compression springs are arranged to the slider, which are connected to each other at their ends, which are not supported on the slider, by a cross-bar. The locking arm has an inclined face, which, when inserting the male connector into the female connector, abuts the retaining projection. In this case, the slider is in a position, in which its retaining face is not in contact with the locking arm. For this, the locking arm is held by means of retaining means in a provisional (preliminary) position. When the male connector is inserted into the female connector, not only the locking arm with its hook-like projection abuts the retaining projection, but also the cross-bar, connecting the two compression springs, comes to abut the end face of the female connector.

If the male connector is further inserted, the springs are ~~pre-tensioned~~ loaded. The hook-like ~~locking element~~ projection of the locking arm slides over and passed the retaining projection.

Hereby, the locking arm has reached a position, in which its locking face is allowed to engage behind the retaining projection. Hereby, also the compression springs are released in their effect, i.e. the retaining means re-lease the slider, so that it is, because of the force of the springs, moved away from the retaining projection, whereby the retaining face of the slider gets above the locking arm and retains the same in its engagement position against displacement. Hereby, the retaining means are also brought back into their original position, so that also the springs are not loaded anymore. For releasing purposes, the slider has to be moved against the detaching direction of the male connector, so that the locking arm is released. To provide a sufficiently large contact area for the support of the compression springs, ribs, which are arranged in the prolongation of the extension of the compression springs, i.e. extend parallel to each other in the connection direction and extend from the end face of the female connector up to the retaining projection, are provided on the female connector housing.

Page 3, last paragraph, delete in its entirety, and insert the following new paragraph:

DE 100 52 970 A1 describes a connector, comprising a female connector and a male connector, wherein to the male connector a slider is arranged, which is formed integrally with a compression spring and is initially ~~pre-tensioned~~ loaded during the insertion and produces an expulsion force, as long as the final connection condition is not reached. This slider serves,

furthermore, as a retaining element in the connected condition. The elastic portion formed as a compression spring comprises a serpent-like bent leaf spring-like portion.

Page 4, second paragraph, delete in its entirety, and insert the following new paragraph:

The invention is based on the object to propose a male connector for a common fe-male connector, i.e. such a female connector, in which ~~only~~ at least one retaining projection is provided, which is simple to operate and as long as no final connection is achieved, produces a force, which detaches the male connector from the female connector.

Page 5, second paragraph, delete in its entirety, and insert the following new paragraph:

Of advantage in this embodiment is, that the male connector can be used in connection with common female connectors, which ~~only~~ have at least one retaining projection, so that without changing the same it is ensured, that the male connector can be separated from the female connector as long as no final locking position has been reached. Furthermore, the operating is simplified in such a way, that during the connection it only has to be acted upon the male connector housing in such a way that this is moved relative to the female connector housing i.e. towards the base of the latter. The releasing of the slider for the final retainment of the locking arm is achieved automatically depending on the position of the male connector housing relative to the female connector housing, in that the leaf spring-like retaining element is brought

out off working engagement to the end face of the female connector housing and therefore, the force of the compression springs acting between the male connector housing and the slider comes to act. The slider is displaced relative to the female connector housing and the male connector housing in such a way, that the locking arm is secured against displacement into the released position. This position can simply be released in such a way, that for the detaching of the male connector from the female connector it is acted upon the slider only in detaching direction. Furthermore, it is an important advantage, that the retaining element is a separate component, i.e. a component separated from the slider, made from a material, which practically shows no wear or set. By means of this layout of the retaining element in connection with the arrangement of the attachment portions in the ~~off-set~~off-setting insertion bores of the slider a compact design is achieved, as the attachment of the retaining element on the slider requires only a small space and can be used advantageously for the provision of the necessary spring path.

Page 7, last paragraph, bridging to page 8, first and second paragraphs, delete in their entirety, and insert the following new paragraphs:

Locking projections are arranged in the area of the end of the longitudinal struts 22 which is close to the locking ~~strut 23~~ projections 24. In the area opposite thereto, at least one re-leasing face 25, which away from the end face 17 departs from the second longitudinal axis 15, is arranged adjacent to the longitudinal struts 22. Furthermore, in this area lateral to the longitudinal struts 22 of the locking arm 21, two first spring sup-ports 26 are arranged, which

support the compression springs 27 on one end. The locking strut 23 has on its lower side an adjustment face 28, which away from the first spring support 26 departs from the second longitudinal axis 15.

The male connector housing 14 is enclosed by a tubular slider 29. The slider has in its inner chamber, towards an end face, ~~two~~second spring supports 30, on which the compression springs 27 with their other end are supported. In the face opposed to the second spring supports a not represented adjustment recess is provided, which in the mounted condition of the slider 29 on the male connector housing 14 interacts with a not represented movement abutment of the male connector housing 14 and which abutment limits the movement of the slider 29 relative to the male connector housing 14 along the second longitudinal axis 15. Furthermore, on the slider 29, not represented locking abutments 33 are provided, which in the completely connected condition of the female connector 1 with the male connector 13, retain the locking arm 21 on the female connector housing 2 against displacement, i.e. are arranged opposed to the locking projections 24.

Page 9, second paragraph, delete in its entirety, and insert the following new paragraph:

The compression springs 27 act on the slider 29 for taking up the position, shown in Fig. 2, on the male connector housing 14. The first housing portion 16 is inserted into the insertion chamber 5 of the female connector housing 2 with the first longitudinal axis 3 and the second longitudinal axis 15 aligned to each other. Due to this, the retaining element 35 together with the

windings ~~40-38~~ or the connection portion 36, respectively, comes to rest against the end face 6 or the chamfer following this towards the insertion chamber 5 of the female connector 1. The retaining element 35 is in the relaxed condition. If the female connector 1 and the male connector ~~14-13~~ are further moved in connection direction (see Fig. 3), the slider 29 remains stationary in relation to the female connector 1, while the first housing portion 16 is moved deeper into the insertion chamber 5. At the same time, the locking arm 21 is released and can together with its locking strut 23 slide passed the abutment face 11 of the retaining projection 10, being elastically deformed at the same time and can engage behind the retaining face 12.

Page 9, last paragraph, bridging to top of page 10, please delete the paragraph in its entirety, and insert the following new paragraph:

During this movement the first contact 7 is moved deeper into the first housing portion 16 of the male connector housing 14 below the windings 38 or the connection portion 37 of the retaining element 35, respectively, so that at the same time or when further inserting the male connector housing 14 into the insertion chamber 5 and during the approximation of the end face 17 towards the base 8 of the female connector housing 1, the retaining element 35 is deflected, so that its windings ~~40-38~~ are brought out off contact to the end face 6 of the female connector 1. The compression springs 27 ~~pre-tensioned~~ loaded during the insertion of the male connector housing 14 into the female connector 1, can become active and displace the slider 29 relative to the male connector housing 14 in direction towards the base 8, whereby the retaining element 35 slides on the outer face 9 of the female connector 1. In this position the compression springs 27

Preliminary Amendment
Serial No.: 10/656,177
Sughrue Ref: Q76971

are relaxed and the slider ~~30~~29 is restored in relation to the male connector housing 14 into the position, shown in Figures 2 and 4, in which the locking arm 21 is secured against displacement away from the second longitudinal axis 15.

Page 10, last paragraph, delete in its entirety, and insert the following new paragraph:

To detach the male connector 13 from the female connector 1, the slider 29 is moved away from the base 8, whereby the releasing projections 31 come under the adjustment face ~~29~~28 of the locking arm 21 and lift the locking arm 21 out off engagement with the retaining projections 10.